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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/664,332

09/18/2000

Noriya Hayashi

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KRATZ, QUINTOS & HANSON, LLP  
1420 K Street, N.W.  
4th Floor  
WASHINGTON, DC 20005

EXAMINER

SELLERS, ROBERT E

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

08/06/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/664,332	<b>Applicant(s)</b> HAYASHI, NORIYA	
	<b>Examiner</b> ROBERT SELLERS	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-8,10,12,22,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-8, 10, 12, 22, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1 May 2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

This is responsive to the Request for Continued Examination (RCE) and amendment filed July 13, 2010.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in the non-Final rejection mailed April 24, 2002.

Claims 1, 2, 6-8, 10, 12, 22, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamazu et al. Patent No. 5,359,017; Buchwalter et al. Patent No. 5,879,859; Starkey Patent No. 5,384,339 and Green Patent No. 4,252,592 In view of Green et al. Patent No. 4,299,938 (Green et al. '938).

The rejection is maintained for the reasons of record set forth in the previous Office actions, particularly pages 3-6 of the Examiner's answer mailed December 21, 2005 which has been affirmed by the Board of Patent Appeals and Interferences (BPAI) in the decision mailed May 11, 2010.

1. The photopolymerizable resin component of independent claim 1 has been limited to the an epoxy resin component having a cyclic ether structure in a molecular structure of cancelled claim 3 and an acid anhydride without the derivative thereof which was included in the 35 U.S.C. 103(a) rejection applied in the Examiner's answer.

**Hamazu et al.** (col. 15, Examples 33-38, lines 34-35, 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate and col. 5, line 14, acid anhydride), **Buchwalter et al.** (col. 2, lines 24-26, cycloaliphatic diepoxide and col. 6, lines 50-54 and 64-65, elected species of maleic anhydride),

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**Starkey** (col. 4, lines 16-18, 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate and col. 20, lines 38-39, maleic anhydride) and **Green** (col. 4, lines 1-2, 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate and col. 4, lines 16-17, polycarboxylic acid anhydride) all show cycloaliphatic epoxy resins and acid anhydrides within the newly defined cyclic ether structure-containing epoxy resin and acid anhydride without a derivative thereof in claim 1.

2. The term “cyclic ether structure” is interpreted to embrace species such as the 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate employed in Examples 1-21 on pages 65-75 of the instant specification and disclosed in Hamazu et al., Starkey and Green, especially since the term is not defined on page 26 describing the myriad species of photopolymerizable resin component including epoxies such as an alicyclic epoxy.

3. Independent claims 27 and 28 are not limited to a cyclic ether structure-containing epoxy resin and an acid anhydride without a derivative thereof.

The argument filed July 8, 2010 has been considered but is unpersuasive.

4. Paragraph 7 on page 6 of the BPAI decision acknowledges the lack of commensurateness of the evidence presented in Declaration I filed March 3, 2003 and Declaration II filed May 13, 2004 and Comparative Examples 2 and 3 on pages 75-76 of the specification with respect to the "single type of resin and curing agent, and to photoinitiators having Formula (IV) (Rep. Br. 7-8), and that the testing was not conducted at or near the endpoints of the ranges recited in the last two paragraphs of claim 1 (Rep. Br. 9)."

5. The limitation of independent claim 1 to a cyclic ether structure-containing epoxy resin and acid anhydride does not relieve the burden of establishing the criticality of the diverse functional and structural species within the claimed acid anhydride such as the various structures depicted on page 41, the photoinitiators such as those within Formulae (IV') and (V), and the endpoints of the molar ratio of the acid anhydride:photopolymerizable resin of from 0.3:1 to 1.4:1 and the from 0.1 to 6.0 parts by weight of photopolymerization initiator per 100 parts by weight of the total weight of the other components. Furthermore, the lack of commensurateness of the photopolymerizable resin component still applies to independent claims 27 and 28 which are not confined to a cyclic ether structure-containing epoxy resin and acid anhydride without a derivative thereof.

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This is a RCE. All claims are drawn to the same invention and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case (MPEP § 706.07(b)). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

(571) 272-1093 (Fax No. (571)-273-8300)  
Monday to Friday, 9:30 to 6:00

/Robert Sellers/  
Primary Examiner  
Division 1796

rs  
8/3/2010